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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/275,727	03/24/1999	ANKE T. DEJONG	ADAPP091A	1135

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EXAMINER

TRAN, MYLINH T

ART UNIT	PAPER NUMBER
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2174

DATE MAILED: 07/02/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/275,727

Applicant(s)

DEJONG ET AL.

Examiner

Mylinh T Tran

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 April 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18, 20 and 21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18, 20 and 21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Applicant's amendment filed 04/23/03 has been entered and carefully considered. Claims 1-3, 6-7, 10, 13, 16 and 21 have been amended. However, limitations of amended claims have not been found to be patentable over prior art of record, therefore, claims 1-18 and 20-21 are rejected under the same ground of rejection as set forth in the Office Action mailed (12/18/02).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, 14-17 and 18, are rejected under 35 U.S.C. 103(a) as being unpatentable over Wollrath et al.[US. 6,263,350] in view of Smith et al.[US. 5,829,053] and further in view of Ofer et al. [US. 5,890,204].

As to claims 1, 17 and 18, Wollrath et al. discloses a storage area network management and configuration system comprising an enterprise network including a plurality of computer systems, the plurality of computer systems including server computer systems and client computer systems (column 2, line 46-64, figure 7, column 10, lines 41-55) wherein the server computer systems include a server component (figure 8, 1100), and the client computer systems

include a client component (figure 8, 1000). The difference between Wollrath et al. and the claim are a storage enclosure being connected to a server computer system having the server component, the storage enclosure having a RAID array of disks and a graphical user interface provided by the client component at a client computer system, the graphical user interface provides a graphical representation of the enterprise network and icon links to configuration tools for selecting and structurally defining at the client computer system the RAID array of disks of the storage enclosure connected to the server computer system.

Smith et al. shows storage enclosure that has a RAID array of disks (Figure 6, 86a, 86bm 86c and 80, column 6, lines 23-40). Smith et al. also cites "The memory disk can include multiple physical storage devices, including one or more redundant arrays of independent disks (RAIDs)" (see column 4, lines 2-6). It would have been obvious to one of ordinary skill in the art, having the teachings of Wollrath et al. and Smith et al. before them at the time the invention was made to modify the enterprise network taught by Wollrath et al. to include the storage enclosure having a RAID array of disks of Smith et al., with the motivation being to make efficient managing storage resources as taught by Smith et al. While Smith et al. teaches the storage enclosure, he does not show the graphical user interface. Ofer et al. teaches the graphical user interface provides a graphical representation and icon links to configuration tools for controlling the RAID array of disks of the storage enclosure. Ofer et al. cites " a method for configuring a mass storage system, in which an array of disk

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storage devices connect to a storage controller and a plurality of host computers also connect to the storage controller, provide the capability of using a convenient graphical user interface at the host computer...the user can also, using the graphical user interface, modify the system status or configuration" (see abstract); Ofer also shows selecting and structurally defining the RAID array of disks of the storage enclosure (Ofer cites at column 4, lines 50-60 "to easily modify those connections using a convenient graphical user interface at the host computer, enables a user to modify, on the fly, the entire logical structure of the disk storage system" read as the structured RAID array of disks; Ofer also discloses the structurally defining including a capability for graphically assigning a RAID level "each storage controller has two disk adapter boards labeled DA15 and DA16, each board able to connect to four disk drives labeled A, B, C and D. Thus, the storage controller controls up to, in this particular illustrated embodiment, eight disk drive units, although in other embodiments of the invention more or less hosts can communicate with more or less disk drives" at column 5, lines 7-17. While Ofer et al. shows the graphical user interface, Wollrath et al. teaches the client computer system in order to disclose the limitation: the graphical user interface provided by the client component at a client computer system. It would have been obvious to one of ordinary skill in the art, having the teachings of Wollrath et al., Smith et al. and Ofer et al. before them at the time the invention was made to modify the network system and the storage enclosure taught by Wollrath et al. and Smith et al. to include the

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graphical user interface configuration of Ofer et al., for the purpose to make more convenient to manage the storage device over the network as taught by Ofer et al.

As to claim 2, Ofer et al. shows an array modifier link for selecting a RAID array that is desired to be modified in terms of adjusting a drive selection and RAID level (column 4, lines 42-67).

As to claim 14, Smith et al. teaches the viewing of the enterprise network can be of physical devices or logical devices, and the physical devices and the logical devices can be displayed in one of a tree view and a quick view (column 2, lines 61-65).

As to claim 15, Smith et al. shows a graphical failure representation is provided of selected drives of the storage enclosure, the graphical failure representation being configured to be displayed on a failed drive when the failed drive is in a viewable setting and on the storage enclosure when the failed drive is not in the viewable setting (column2, lines 1-15).

As to claim 16, Wollrath et al. shows the client component provides a user administrator the management and configuration control to the enterprise network (column 9, lines 40-57).

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences

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between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3-10, 13 and 20-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wollrath et al.[US. 6,263,350] in view of Smith et al.[US. 5,829,053], further in view of Ofer et al. [US. 5,890,204] and further in view of Leong et al.[US. 6,269,398].

As to claim 3, the difference between Wollrath et al., Smith et al., Ofer et al. and the claim is an array builder link, the array builder link when selected provides selection tabs to allow array building from an array template or from scratch. Leong et al. teaches an array builder link (figure 4, 441, 442, 443). The elements are represented as the tabs for the array builder link. It would have been obvious to one of ordinary skill in the art, having the teachings of Wollrath et al., Smith et al., Ofer et al. and Leong et al. before them at the time the invention was made to modify the storage area network management taught by Wollrath et al., Smith et al., Ofer et al. to include the array builder link of Leong et al., with the motivation being to make efficiently processing between storage enclosure and the graphical representation and linking icons as taught by Leong et al.

As to claim 4, Smith et al. also discloses selecting hardware to configure, the hardware to configure is selected from the storage enclosure or from additional storage enclosures that are connected to the enterprise network

(column 5, lines 12-21), selecting an array template that contains a RAID configuration scheme that is optimally selected for a particular storage application (column 6, lines 23-40). The difference between Smith et al. and the claim is dragging the selected array template, that is in the form of an icon, over the selected hardware or dragging the selected hardware over the selected array template, the dragging is configured to automatically apply the RAID configuration scheme. Ofer et al. shows the dragging on column 5, lines 44-55. As to claim 5, Smith et al. shows a RAID level, a number of drives in the selected hardware, a number of spare drives, a stripe size and an array address (Figure 6, 86a-86b, 81a-81b, column 8, lines 50-65). As to claim 6, Leong et al. teaches an enterprise monitor link, when selected the monitor link provides a window wherein monitoring settings can be set (Figures 7 and 9). As to claim 7, Leong et al. discloses a failure indicator (Figure 8) and a disk capacity indicator (Figure 15). As to claim 8, Leong et al. teaches a temperature indicator for the storage enclosure, a battery health indicator and a power supply health indicator (column 1, lines 25-37). As to claim 9, Leong et al. shows an enterprise monitor window for providing a quick view of selected storage enclosure parameters (column 10, lines 34-42).

As to claim 10, Leong et al. discloses an event notifier link, when selected provides customizable failure and status notifications (Figure 8 and Figure 15, column 9, lines 48-62).

As to claim 13, Leong et al. discloses an enterprise icon, when selected allows viewing of the enterprise network that includes the plurality of computer systems and associated storage enclosures that are connected to computer systems having the server component (column 11, lines 6-25).

As to claim 20-21, the claimed limitations are similar in scope to claim 1, and thus would have been rejected under similar rationale. It is further noted that Leong et al also teaches the graphical user interface control includes one or more of an array modifier icon link, an enterprise monitor icon link, an array builder icon link, an event notifier icon link, an unconfigured hardware icon link, a templates icon link, and an enterprise icon link (column 11, lines 6-25)

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 11-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wollrath et al.[US. 6,263,350] in view of Smith et al.[US. 5,829,053],

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further in view of Ofer et al. [US. 5,890,204], further in view of Leong et al.[US. 6,269,398] and further in view of Madsen et al. [US. 6,151,620].

As to claims 11 and 12, the difference between Wollrath et al., Smith et al., Ofer et al, and Leong et al., and the claim are the setting user notification profiles, the profiles include communication information and the communication information includes e-mail information and pager information. Madsen et al. shows the communication information (column 3, lines 25-45). It would have been obvious to one of ordinary skill in the art, having the teachings of Wollrath et al., Smith et al., Ofer et al, Leong et al., and Madsen et al. before them at the time the invention was made to modify the storage area network management taught by Wollrath et al., Smith et al., Ofer et al, Leong et al., to include the communication information of Madsen et al., in order to make efficient managing the network and the configuration as taught by Madsen et al.

Response to Amendment

Regarding claims 1 and 18, Applicant has argued that Wollrath fails to teach “a storage area network management and configuration system”. However, Wollrath discloses the limitation at column 2, lines 47-64 and column 9, lines 41-58. Wollrath cites “distributed processing system contains three independent and heterogeneous platforms connected in a network configuration represented by the network cloud”. Applicant also argued Wollrath does not show the user of a client computer to access a storage enclosure. However, Wollrath cites in the

abstract "a client requests access to storage locations for a period of time from a server such as the file system manager".

Applicant argues Smith does not teach the use of an enterprise network or a storage area network management and configuration system. However, while Wollrath shows the enterprise network, Smith teaches the storage area management at the abstract "A memory management system and method of managing a memory system. The memory management system includes a plurality of physical storage media and a memory manager for generating virtual storage devices". Also, Applicant argues Smith does not teach the user of a GUI having graphical representations and icon links to configuration tools for controlling a RAID device. However, Applicant's argument is not persuasive, the Examiner relied on Ofer system to disclose the limitation.

Next, in response to Applicant's argument that Ofer does not teach a GUI, provided by the client component at the client computer system. Although Ofer teaches the graphical user interface providing a graphical representation and icon link to configuration tools for selecting and structurally defining at the host computer, Wollrath shows the client computer system. So, in combination of Ofer and Wollrath, the limitation is taught. Also, although Ofer only includes the graphical representation, Wollrath teaches the enterprise network. Therefore, Ofer and Wollrath teach the graphical representation of the enterprise network. The motivations to combine Wollrath, Smith and Ofer are "It would have been obvious to one of ordinary skill in the art, having the teachings of Wollrath et al.,

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Smith et al. and Ofer et al. before them at the time the invention was made to modify the network system and the storage enclosure taught by Wollrath et al. and Smith et al. to include the graphical user interface configuration of Ofer et al., for the purpose of making it more convenient to manage the storage device over the network as taught by Ofer et al.” and “It would have been obvious to one of ordinary skill in the art, having the teachings of Wollrath et al., Smith et al. and Ofer et al. before them at the time the invention was made to modify the network system and the storage enclosure taught by Wollrath et al. and Smith et al. to include the graphical user interface configuration of Ofer et al., for the purpose of making it more convenient to manage the storage device over the network as taught by Ofer et al.”

Regarding claims 3 and 21, Applicant has argued Leong does not teach the array link. The Examiner does not agree. Leong et al. teaches an array builder link (figure 4, 441, 442, 443, column 10, lines 20-40 and column 11, lines 7-25). The elements are represented as the tabs for the array builder link. Also, Keong shows arrays and how things are set up in the array.

Regarding claim 21, Applicant has argues Leong does not teach the user of a GUI control for enabling a user to remotely configure drives of a storage enclosure. Although Leong itself does not teach the limitation, in combination with Wollrath, Ofer, Smith and Leong, the references show the user of a GUI control for enabling a user to remotely configure drives of a storage enclosure

Also, Leong suggests the enterprise monitor icon link at column 11, lines 5-25 "when the network manger clicks on the triangle button, the main window is removed from display and a small icon representing the session appears at the bottom of the display screen...The network manager can then simply monitor the color of the icon..."

Finally, the motivation to combine Leong, Wollrath and Smith and Ofer is "It would have been obvious to one of ordinary skill in the art, having the teachings of Wollrath et al., Smith et al., Ofer et al. and Leong et al. before them at the time the invention was made to modify the storage area network management taught by Wollrath et al., Smith et al., Ofer et al. to include the array builder link of Leong et al., with the motivation being to enhance the processing between storage enclosure and the graphical representation and linking icons as taught by Leong et al."

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In

no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Conclusion

The prior art made of record on form PTO-892 and not relied upon is considered pertinent to applicant's disclosure. Applicant is required under 37 C.F.R. § 1.111 (c) to consider these references fully when responding to this action. The documents cited therein teach the storage area network management and configuration system and the communication information he communication information includes e-mail information and pager information. Responses to this action should be mailed to: Commissioner of Patents and Trademarks, Washington, D.C. 20231. If applicant desires fax a response, (703) 746-7238, may be used for formal After Final communications, (703) 746-7239 for Official communications, or (703) 746-4395 for Non-Official or draft communications. NOTE, A Request for Continuation (Rule 60 or 62) cannot be faxed.

Please label "PROPOSED" or "DRAFT" for information facsimile communications. For after final responses, please label "AFTER FINAL" or "EXPEDITED PROCEDURE" on the document.

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA., Fourth Floor (Receptionist).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mylinh Tran whose telephone number

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is (703) 308-1304. The examiner can normally be reached on Monday-Thursday from 8.00AM to 6.30PM

If attempt to reach the examiner by telephone are unsuccessful, the examiner 's supervisor, Kristine Kincaid, can be reached on (703) 306-0640,

All Internet e-mail communications will be made of record in the application file. PTO employees do not engage in Internet communications where there exists a possibility that sensitive information could be identified or exchanged unless the record includes a properly signed express waiver of the confidentiality requirements of 35 U.S.C. 122. This is more clearly set forth in the Interim Internet Usage Policy published in the Official Gazette of the Patent and Trademark on February 25, 1997 at 1195 OG 89.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-3800.

Mylinh Tran

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Kristine Kincaid
KRISTINE KINCAID
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